



PSCnews

Public Service Commission of South Carolina

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Patty Sands, Editor

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Nuclear Power Applications at the PSC

Duke Energy Carolinas and South Carolina Electric and Gas (SCE&G) recently submitted applications to the Commission related to the possible generation of additional base load electricity using nuclear power.

In late 2007, Duke Energy applied for permission to incur pre-construction costs for the proposed Lee Nuclear Station in Cherokee County, South Carolina (Docket 2007-440-E.) Under the Base Load Review Act of 2005, a utility company may seek Commission approval to incur pre-construction costs to explore and pursue licensing of possible nuclear facilities that will generate base load electricity. Duke Energy had requested approval of its decision to incur \$67 million in pre-construction costs, South Carolina's share of the proposed facility which would serve North Carolina as well. The Commission granted Duke Energy's request on June 9, 2008. However, this ruling does not allow pre-construction costs to be factored into rates at this point. Duke Energy will have to prove the prudence of the individual expenditures before they can be recovered. If Duke Energy should decide to go forward with the Lee Station project, it would have to apply to the Commission for a base load order approving the construction and financing of the reactor.

In May of this year, SCE&G submitted a combined application for the siting and construction of two

additional nuclear reactors at its V.C. Summer Nuclear Station in Jenkinsville, South Carolina (Docket 2008-196-E.) SCE&G has entered into a partnership with the South Carolina



Public Service Authority (Santee-Cooper) to construct and operate the proposed reactors. SCE&G would contribute 55% of the capital and operating costs to the project and receive the same percentage of electrical output. Santee-Cooper would be responsible for the remaining 45% of the costs and receive 45% of the electrical output for use in its system.

The proposed Westinghouse AP1000 reactors would generate 1117 MW each, with a completion date of 2016 for the first reactor and 2019 for the second. SCE&G's estimated share of the project is \$6.3 billion.

On October 7, 2008, the Commission gave SCE&G permission to begin some preliminary construction activities at the proposed site at its own cost. These activities include relocating a rail line, improving existing delivery routes, site clearing, and excavation. SCE&G may request recovery of these costs at a later date. The Commission's recent ruling did not constitute approval of the plants. The hearing on this case is scheduled for December 1, 2008 at 9:30 a.m. at the Commission's Office in Columbia.

For more information, visit the Commission's Docket Management System online at <http://dms.psc.sc.gov>.

From the Chair...*Lib Fleming*

Job Prospects In the Energy Sector



With South Carolina's jobless rate hovering around seven percent, our state's workers are experiencing tough times.¹ The state of the national economy does not offer much encouragement either; a recent survey by the National Association of

Colleges and Employers revealed the weakest job market for college graduates in six years.² However, there are still good job opportunities in the energy sector.

Utilities are facing a national shortage of engineers, and the Carolinas are not exempt from this trend. Companies tell of a "recruiting war" over new engineering graduates, who are in shorter supply than ever.³ AREVA, a worldwide nuclear plant designer with about 10 percent of its U.S. employees in the Charlotte area, plans to add up to 250 jobs by 2012.⁴ Fluor Corporation, the Shaw Group, and URS Corporation also compete for engineering talent in the Charlotte area.⁵

The U.S. Department of Labor estimates that 30 percent of engineers will be eligible for retirement in the next five years.⁷ To further complicate the workforce issue, the number of graduates with a bachelor's degree in engineering fell 25% between 1985 and 2001, leaving a big hole in that segment of the labor force. Middle-aged professionals, workers who would be at risk in other market sectors, are in great demand. Trey Wills, Executive Director of Operations of Fluor Corporation's Power Group, sums up his company's difficulty finding experienced engineers this way: "Engineers are either 60 or 20".⁸

Efforts are being made to meet the growing demand for engineers. The Nuclear Regulatory Commission (NRC) has awarded nearly \$20 million to 60 different institutions to boost nuclear education and expand the workforce for nuclear energy. In South Carolina, Clemson University, South Carolina State University, the University of South Carolina, and Florence/Darlington Technical College received

nearly \$1.4 million in grants from the NRC for scholarships, fellowships, faculty development, and curriculum development.⁶ In the Upstate, Converse College and Clemson University have partnered to offer an engineering dual-degree program designed to attract more women into the field.

Growing demand is not limited to engineering, however. In 2005, the American Public Power Association reported that 36 percent of senior utility managers, and 30 percent of general utility managers, are likely to retire by 2010.¹⁰ These numbers explain why the National Energy Reliability Council believes the aging workforce is one of six emerging challenges to the reliability of the nation's electric grid. South Carolina's utility companies each have initiatives to help fill their workforce requirements.

Duke Energy has formed a joint venture with Spartanburg Community College (SSC) to offer an Associate Degree in Occupational Technology with a major in Radiation Protection Technology (AOT/RPT).⁹ In this unique program, SCC faculty members teach freshmen core classes, and Duke Energy instructors teach the Institute of Nuclear Power Operations (INPO) accredited radiation protection curriculum to sophomores. Students also have two 240-hour-minimum internships at nearby Duke Energy nuclear power facilities prior to graduation.

Power Careers is a scholarship program designed by Progress Energy to prepare students for careers in power plant operations and to support the completion of targeted two-year associate degrees. Graduates have career opportunities with Progress Energy. SCANA has a co-op program which allows college students to work and prepare for jobs in the power industry while they attend school. SCANA also offers apprenticeship programs for high school graduates and technical college students.

Opportunities are not confined to the traditional power sector. The growing demand for renewable energy is creating new jobs. According to the U.S. Energy Information Administration, renewable energy accounted for more than 10 percent of the domestically-produced energy used in
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Why Electricity Rates Keep Going Up

**Charlie Terreni,
Chief Clerk and
Administrator**



One after the other, newspaper headlines seem to announce increases in electric rates. Naturally, people wonder why the Public Service Commission keeps allowing the utilities to raise rates. In the vast majority of these cases, the answer is simple: the cost of generating electricity is going up.

Under state law, S.C. Code Section 58-27-865, utilities are allowed to recover the past and future cost of fuel used to generate electricity as well as certain environmental costs incurred to comply with environmental regulations. Fuel cost cases are brought before the Commission at least once a year. On the other hand, so-called base rate cases, which determine the revenue and expected rate of return that may be earned by each company, are far less frequent. Progress Energy brought its last base rate case in 1988, Duke Energy Carolinas in 1991, and SCE&G in 2007.

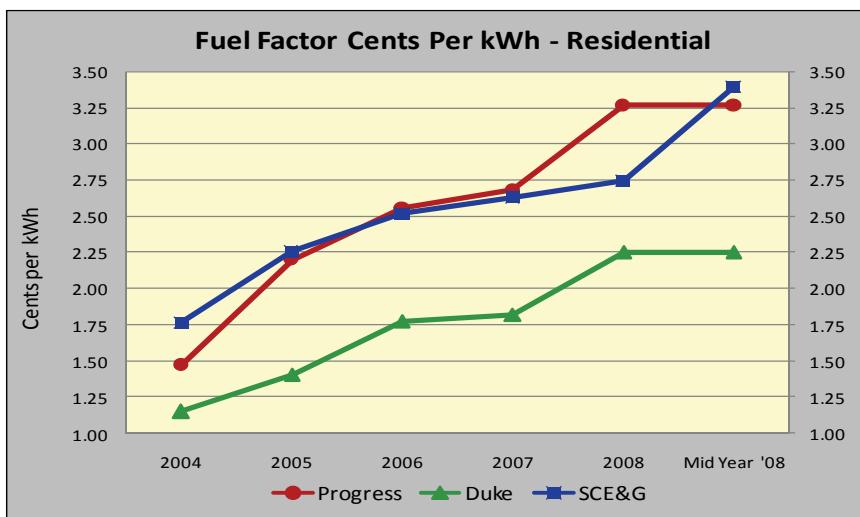
The utility's recovery in fuel cost cases does not include any return for the utility's shareholders. A fuel cost case is purely a pass-through of the utility's fuel and environmental costs to the customer

if the Commission determines that the utility's fuel purchases were prudent and that its forecasts of upcoming costs are reasonable.

In each fuel cost case, the utility's past recovery is adjusted to account for the difference between the previous year's forecasted and actual costs. If the company paid more than expected for fuel costs, a rate increase is needed to compensate for its "under recovery".

The fuel costs that utilities may recover include the cost of coal, gas, nuclear fuel, fuel transportation, and those fuel costs related to power purchased from other energy producers. Recoverable environmental costs include the cost of certain minerals and chemicals used in reducing or treating emissions, and the cost of emission allowances for pollutants such as sulfur dioxide, nitric oxide, mercury, and particulates emitted by power plants.

The following chart shows that the "fuel factor" – the amount charged per kilowatt hour by the company to recover its fuel and environmental compliance costs – has nearly doubled for each company since 2004. The differences between each company's fuel costs can be attributed to their respective generation mixes (gas, coal, nuclear, hydroelectric, and renewables) and the fluctuating costs of the different types of fuel. Unfortunately, fuel and environmental costs have been rising, and now represent as much as 33% of the price per kWh paid by a residential customer (rates vary according to company and the plan chosen by a customer).



Swain E. Whitfield Joins Commission as At Large Representative



Swain E. Whitfield of Blythewood began service on the Public Service Commission of South Carolina on July 1, 2008. He was elected by the General Assembly on May 21, 2008 as the At-Large District representative to the Commission.

Commissioner Whitfield was a member of the Winnsboro City Council from 1995-1999 during which time the city expanded its electric, gas, and water services and assumed operation of a wastewater plant. With a keen interest in economic development, Commissioner Whitfield understands that South Carolina has many resources available to attract businesses and residents to the state and wants to be an advocate for the future needs of South Carolina. He will

draw on his background in the highly regulated transportation industry and his experience in local government when serving on the Commission.

Commissioner Whitfield recently stated, "One of the biggest issues the Commission must address in the near future is the increasing demand for electricity and the need for additional generation." As a new commissioner, he is looking forward to involvement in the National Association of Regulated Utility Commissioners (NARUC) meetings and committee participation.

A native of Winnsboro, Commissioner Whitfield graduated from the University of Georgia with a degree in geography. In 1991, after working several years in the transportation industry in the Atlanta and Columbia areas, he founded and served as president of Whitfield Transportation, Inc., a transportation brokerage and trucking company based in Winnsboro. Married to the former Amy Mills, the couple have three children and reside in Blythewood.

Chief Clerk and Deputy Clerk Complete Leadership Programs

Two members of the Public Service Commission staff recently completed prestigious leadership training programs. Over the past year, Chief Clerk Charles Terreni participated in the Executive Institute for Leadership Program. Modeled after a course offered by Harvard's Kennedy School of Government, the program had approximately forty participants from state and local governments and the private sector. Faculty drawn from universities around the country used case studies to teach public management principles.

Deputy Clerk Jocelyn Boyd has completed the Certified Public Manager (CPM) Program. The CPM course is a nationally accredited program presented by the SC Office of Human Resources. The eighteen-month program involved instruction and application of the knowledge

learned to on-the-job problem solving and human resource development. Jocelyn was one of forty-seven graduates of this year's program.

Jocelyn also completed Leadership South Carolina, a nine-month program in which participants learn about the state's natural resources, quality of life, economic development, education, social issues and diversity. Leadership South Carolina's faculty included business, community, and government leaders.



Deputy Clerk Jocelyn Boyd

PSC Holds Workshop to Review Federal Energy Mandates

The Commission held a public workshop earlier this year to discuss the implications of federal proposals to set standards for renewable energy and limit carbon emissions. Representatives from the Electric Cooperatives of South Carolina and the state's three investor owned utilities (IOUs), Duke Energy Carolinas, Progress Energy Carolinas and South Carolina Electric and Gas Company, presented information to the Commission concerning the legislation.

At the time of the workshop, several bills were being considered at the federal level, but the most discussed were America's Climate Security Act of 2007 (S.2191) sponsored by Senator Joseph Lieberman and the Renewable Energy and Energy Conservation Tax Act of 2007 (H.R.3221) sponsored by House Speaker Nancy Pelosi. Reducing greenhouse gas emissions is the main focus of S.2191. Emissions would be capped for covered sectors, including the electric power sector, and allowable emissions would be limited beginning in 2012, with declining limits to 2050. An emission allowance transfer system would provide a mechanism for entities that cannot meet the cap to trade excess emissions.

Under H.R.3221, by the year 2010, electricity generated from renewable energy sources would have to comprise 2.75% of a utility's retail energy sales, a percentage that would increase to 15% by 2020. Utilities that do not meet this standard would be penalized. According to participants in the workshop, the estimated annual cost to ratepayers under H.R.3221 could be

at least \$265 million, with most of that money going to Washington in the form of penalties because South Carolina has fewer resources available to tap for renewable energy than many other states.

Michael Couick, President of the Electric Cooperatives of South Carolina, stated that the federal proposals could damage South Carolina's economy and impose severe financial burdens on lower income households. He argued that a "one size fits all" policy should not be implemented for all fifty states because each state has unique factors that contribute to its ability to generate renewable energy. According to Couick, wholesale electricity prices could increase as much as 35% by 2015, and 85% by 2050 under some of the proposals being considered.

With more coal and less renewables available, the impact of legislation on the Southeast region could be drastic.

The message from the IOUs was similar. Carbon legislation will result in additional costs to facilities that emit carbon dioxide while generating electricity. With the imposition of a federal carbon tax on CO₂ emissions, coal reliant utilities would have to use other technologies such as nuclear and renewable energy sources to meet their generating needs.

Across the country, federal energy proposals are sure to be a closely watched item within the energy sector.



Representatives from Duke Energy Carolinas, Progress Energy Carolinas and South Carolina Electric and Gas address the Commission

Technology Updates

Electronic Filers Go Paperless!

The Public Service Commission recently announced a policy change that affects parties who file documents electronically (E-File) using the Commission's Docket Management System (DMS). Paper copies of documents filed with the Commission electronically are no longer required.

Prior to this change, the original document and one copy of the electronic filing were due in the Commission's offices within three business days of the E-Filing, and filings were not processed until the paper copies were received. With the new policy in place, the Commissioners and staff will be able to review documents as soon as they are filed.

To assist with the new policy, DMS was enhanced so that the required docket cover sheet which accompanies all documents filed with the Commission is automatically generated using the information entered into the system. This programming change, along with the elimination of the paper copies, greatly reduces the time involvement of users who choose to file their documents electronically on DMS. For additional information on E-Filing, visit the DMS website at <http://dms.psc.sc.gov>.

ETariff System Expansion

In June, the Commission expanded its online tariff system to include the electric and gas industries. Visitors to the site can now view and search tariffs and promotions related to the telecommunications, electric and gas industries, and registered users can file revisions to these documents. A revision history is maintained on the system to provide historical tracking of each tariff.

Currently the system contains over 460 tariffs from nearly 350 organizations. In addition, over 450 revisions have been submitted electronically, saving time and money since paper copies are not required when filing on the ETariff System. For additional information on the ETariff System, visit the website at <http://etariff.psc.sc.gov>.

Commissioners Elected

Congratulations to Commissioners John E. "Butch" Howard - District 1, Randy Mitchell - District 3, G. O'Neal Hamilton - District 5, and Swain E. Whitfield - At Large Representative who were elected by the General Assembly to the Public Service Commission of South Carolina. Their terms will expire on June 30, 2012.

Job Shadowing at PSC

In conjunction with Groundhog Day, Pine Ridge Middle School in West Columbia encourages its students to job shadow a peer in a field of interest. Brittnee Knight, daughter of PSC staff member Jackie Thomas, spent a day at the Commission shadowing Deputy Clerk Jocelyn Boyd.

Brittnee has aspired to be an attorney since she was in second grade. She would like to one day practice law in family court, so Deputy Clerk Boyd, who has family court experience, was able to give Brittnee excellent advice on undergraduate and law school curriculum choices.

When told of the number of years of schooling that would be required to become a lawyer, Brittnee had no qualms and replied, "It will be worth it." With an attitude like that, Brittnee is bound to succeed.



Deputy Clerk Jocelyn Boyd (l) with Pine Ridge Middle School student Brittnee Knight (r)

From the Chair...*Lib Fleming*

the United States in the first seven months of 2008.¹¹ A \$170 million biomass facility that is expected to bring 27 jobs to Newberry County by 2011 may just be the tip of the iceberg.¹² According to a report by the economic research firm Global Insights, "green jobs" will account for 10% of all new jobs over the next 20 years.¹³

Clearly, South Carolina's energy sector plays a key role in providing the job opportunities that will ensure a good quality of life in our state.

¹ "S.C. Job Losses Up in September", *The State*, October 22, 2008.

² "For '09 Grads, Job Prospects Take a Dive", *The Wall Street Journal*, October 22, 2008.

³ "A Bidding War for Engineers", *The Charlotte Observer*, September 5, 2008.

⁴ *Id.*

⁵ *Id.*

⁶ "NRC Awards Nuclear Education Grants", NRC News, No. 08-141, August 1, 2008.

⁷ "Attracting the Best and Brightest", *EnergyBiz Insider*, April 11, 2008.

⁸ *Id.*

⁹ "Workforce Training Partnership with Duke Energy", By Lawrence J. McKenzie, Ph.D, Duke Energy, Power Engineering, 2008.

¹⁰ "Attracting the Best and Brightest", *EnergyBiz Insider*, April 11, 2008.

¹¹ Monthly Energy Review, October 2008, Energy Information Administration.

¹² "Rollcast Energy to Build S.C. Biomass Facility", *Charlotte Business Journal*, October 15, 2008.

¹³ "America's Hottest Job Markets", *Forbes.com*, October 9, 2008.

Commission Hires New Fiscal Analyst

Gwen Conyers was recently hired by the Public Service Commission as a fiscal analyst. She is responsible for processing all invoices, receipts, disbursements and vouchers, and managing the agency's fixed assets. Gwen has several years of experience in state government accounting and procurement, most recently with the Department of Health and Human Services and the Department of Motor Vehicles.

Gwen was born in Brooklyn, New York, but her family moved several times while she was young before finally settling in Columbia. After graduating from Keenan High School, Gwen attended Coker College in Hartsville, SC, majoring in business with a concentration in management, and received her BA and MBA degrees. Gwen also holds a master's degree in human resource development from Webster University.



Gwen and her twelve year old daughter live in the St. Andrews area of Columbia. They enjoy spending time together reading and playing games. As most mothers and daughters do, they also enjoy shopping together.

Living in Columbia gives Gwen the opportunity to spend time with her family, including her parents and her sister. Because her brother is a professional basketball player in Latin America, she does not see him too often, but she enjoys his visits when he does get back home. Gwen gets her strong sense of family values from her parents, who are currently serving as guardians to two young family members whose parents are serving our country in Afghanistan.

In her spare time, Gwen likes to read, especially spiritual and motivational books. She worships at Zion Baptist Church where she sings in the Young Adult and Mass Choir. Gwen believes in giving time back to her community, and volunteers with the Red Dress Campaign at Providence Heart Institute, Sister Care, and Girl Scouts of the USA.

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